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CAEP Position Statement: Emergency department management of people with opioid use disorder

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# INTRODUCTION

Deaths due to opioid overdose have reached unprecedented levels in Canada—over 12,800 opioid-related deaths occurred between January 2016 and March 2019, and overdose death rates increased by approximately 50% from 2016 to 2018.1 In 2016, Health Canada declared the opioid epidemic a national public health crisis,2 and life expectancy increases have halted in Canada for the first time in decades.3 Children are not exempt from this crisis, and the Chief Public Health Officer of Canada has recently prioritized the prevention of problematic substance use among Canadian youth.4

In 2014, the overall healthcare costs of substance use in Canada were estimated to be $11.1 billion, of which 2.8% ($0.3 billion) were attributed to opioids.5 Since then, healthcare utilization resulting from opioid use has increased dramatically. Opioid-related hospitalizations increased by 27% between 2013 and 2017.6 From 2016 to 2017, emergency department (ED) visits due to opioids increased by 73% in Ontario, and 23% in Alberta.6 Furthermore, youth aged 15 to 24 years have the highest and fastest-growing rates of ED visits related to opioids, tripling over the past five years.6

EDs are often the main source of healthcare for patients with substance use disorders.7 ED visits are crucial opportunities to identify and address the complex needs of patients who are socially and medically marginalized.8 Those who visit the ED frequently are at significant risk of subsequent overdose.9 People who overdose are more likely to have visited an ED in the preceding year, and are more likely than the average patient to have left without being seen or against medical advice.10

In the context of a national opioid crisis, there is a professional imperative for emergency providers to take evidence-based steps to prevent future morbidity and mortality resulting from opioid use and from common presentations of opioid-related illness in ED settings. Non-fatal opioid overdose, rapid opioid tapering, and opioid withdrawal are significant risk factors for subsequent death due to opioid overdose.11, 12 In Canada, ED-based interventions for opioid use disorder (OUD) have been shown to be effective and acceptable to patients.13-16

CAEP supports a broad and multi-faceted public health approach to addressing this complex health crisis and embraces an evidence-based harm reduction approach to substance use, which aims to reduce the harms of substance use without mandating abstinence.17, 18 This position statement offers recommendations designed to position emergency medicine, emergency health care providers, and EDs as key partners in a broad and intersectoral strategy to address Canada’s opioid crisis for Canadians of all ages.

The scope of this position statement is limited to clinical practice in the ED. The recommendations in this position statement are applicable and adaptable across urban, suburban and rural practice environments nationwide, although reasonable modifications may be required to suit local patient needs, demographics, and epidemiology. These recommendations were not developed according to systematic review or guideline methodologies and should not be interpreted as a clinical practice guideline. This position statement is intended to advance common practice, and not to establish a standard of care.

## **RECOMMENDATIONS**

## **Use case-finding strategies to identify opioid and other substance use disorders**

1. *Patients who present with possible sequalae of opioid use disorder should be engaged in a non-judgmental conversation about their substance use history and possible substance use disorders. Providers should consider using available tools to identify patients with opioid use disorder despite the lack of validation in the ED setting.*
2. *Urine drug screens should not be used to diagnose, or rule-out opioid use disorder in the ED due to their low sensitivity and specificity.*

Patients with opioid use disorder often present to the ED with related sequelae such as soft tissue infections and abscesses, infective endocarditis, and opioid intoxication or withdrawal. These ED visits are opportunities for emergency providers to engage patients in care and ask about their substance use history in a non-judgmental and confidential manner. Providers should consider using case-finding strategies (screening in individuals with high-risk features) to identify opioid or other substance use disorders.

There are two main goals of case-finding in the ED: 1) to identify patients with opioid use disorder in order to provide appropriate care; and 2) to enhance the safety of opioid prescribing. Patients with opioid use disorder and concomitant acute pain may require higher doses of opioids due to their higher tolerance compared to opioid-naïve individuals. Although case-finding tools for opioid use disorder have not been well-validated in the ED setting, they may still provide benefit during the patient encounter.

The National Institute on Drug Abuse (NIDA) Single-Question Screening should be considered for use in the ED setting.19 Patients are asked: “How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?” with 100% sensitivity and 73.5% specificity for the detection of a drug use disorder in the primary care setting.19 Although it has not been validated in the ED or pediatric settings, the question’s simple, brief and normalizing attributes make it a promising approach for emergency medicine providers.

There are other case-finding tools that can be considered for use in the ED. The Opioid Risk Tool, developed in the chronic pain clinic setting, is a five-item questionnaire that classifies patients as ‘low’, ‘medium’, or ‘high’ risk for using opioids not as prescribed.20 The Revised Screener and Opioid Assessment for Patients with Pain (SOAPP-R), developed for similar use, is a 24-question screening tool that takes at least ten minutes to administer. Patient self-administration of the SOAPP-R on electronic tablets in the ED has been shown to be feasible, and can be considered by EDs which have access to such resources.21 Finally, the Drug Abuse Screening Test (DAST-10) is a 10-item test that has been validated in a variety of settings, including inpatient and outpatient, but not specifically in the ED.22 The short length of the DAST-10 makes it more feasible for use in the ED.

Although urine drug screens (UDS) are used in some contexts to monitor adherence to opioid agonist therapy, they have limited utility in the diagnosis of opioid use disorders. UDS lack sensitivity and specificity, do not detect all types of opioids, and in particular may give false-negative results when used to detect fentanyl analogues.23 Emergency providers should be aware that patients may still meet criteria for opioid use disorder despite a negative UDS.

## **Initiate first-line opioid agonist treatment in patients with opioid use disorder**

1. *Patients who meet criteria for opioid use disorder should be offered buprenorphine/naloxone initiation in the ED. Take-home doses may be dispensed as an alternate approach to buprenorphine/naloxone initiation in the ED.*
2. *Providers should be familiar with other forms of opioid agonist therapy, such as methadone and sustained release oral morphine.*
3. *Providers should treat opioid withdrawal early, aggressively, and compassionately to reduce the risk of fatal overdose.*

Opioid agonist therapy, i.e. buprenorphine/naloxone or methadone, is standard of care for opioid use disorder, and has been shown to decrease morbidity and mortality due to opioid use, decrease risk of acquiring HIV and hepatitis C, and increase retention in treatment.24, 25 Initiation of opioid agonist therapy after a non-fatal overdose has also been associated with a decrease in all-cause mortality.26

Buprenorphine/naloxone combination therapy is recommended as first-line treatment for opioid use disorder due to its favourable safety profile.24 As a partial opioid mu-receptor agonist, buprenorphine has a ceiling effect with regards to respiratory depression, which makes it a safer option for take-home dosing and initiation. However, due to its high receptor affinity and low intrinsic activity at the opioid mu-receptor, buprenorphine can displace full opioid agonists and result in precipitated withdrawal when initiated improperly.24

For proper initiation, patients should be in moderate opioid withdrawal prior to initiating buprenorphine/naloxone. This can be confirmed with a score greater than 12 on the Clinical Opiate Withdrawal Scale (COWS)27 and a clinical history that suggests adequate time since last opioid use. Once the patient is in appropriate opioid withdrawal and provides consent, buprenorphine/naloxone should be administered sublingually due to its low bioavailability when ingested orally.

A standard initiation process begins with a starting buprenorphine/naloxone dose of 2mg/0.5mg to 4mg/1mg, repeated every one to two hours to reach a maximum of 8mg/2mg to 16mg/4mg depending on provincial guidelines, or until withdrawal symptoms resolve (including cravings).24 This process should be held if withdrawal symptoms worsen—providers should subsequently assess for the possibility of precipitated withdrawal. Should this occur, providers may consider treating withdrawal symptoms with alpha agonists, NSAIDS, and anti-emetics. A home-based initiation should also be considered, where buprenorphine/naloxone doses are dispensed directly from the ED (or alternatively, a prescription is provided) and taken at home when the patient is at an adequate state of opioid withdrawal.28

Patients in moderate or severe opioid withdrawal may remain at risk for precipitated withdrawal despite a COWS score greater than 12, especially those who report long-term fentanyl use, as fentanyl is a lipophilic drug that can accumulate in adipose tissue. Buprenorphine/naloxone microinduction, or the Bernese method, can be used to avoid precipitated withdrawal where very small doses are started on Day 1 (e.g. 0.5mg/0.125mg once or twice daily) and titrated incrementally over time. The full microinduction protocol can take 3-10 days and can be prescribed as daily dispensed doses, or provided directly from the ED to take home, ideally in a blister pack.29

Initiation of buprenorphine/naloxone in the ED is an effective intervention for retention in addiction treatment at one month compared to treatment referral alone, and has a number needed to treat (NNT) of three.28 Providing buprenorphine/naloxone directly in the ED has also been shown to be more cost-effective compared to treatment referral alone.30 Similar protocols have be implemented in several community EDs in Ontario, resulting in a reduction in ED visits that are related to substance use.13 Many other EDs in Canada have also created programs that facilitate initiation of buprenorphine/naloxone.14

In Canada, most provinces do not require special training or licensing to prescribe buprenorphine/naloxone.25 However, providers may choose to pursue additional training in order to increase familiarity and comfort with buprenorphine/naloxone initiation, or to adhere to provincial regulations. ED buprenorphine/naloxone initiation protocols should allow for variability to address differences in local practice patterns, access to outpatient addiction clinics, provincial guidelines, and availability of community supports that meet patient needs.14 ED providers should be aware of low-barrier alternatives such as take-home induction programs, and initiation within non-acute settings, such as clinical decision units or transitional care units.29, 31, 32

Buprenorphine/naloxone initiation in the ED should be protocolized to facilitate implementation, with clearly defined inclusion criteria for appropriate patient selection, appropriate assessment of withdrawal severity, and treatment options in case of precipitated withdrawal. Adequate training should be provided to ensure that staff are familiar with the initiation protocol, and able to provide patient education on the properties of buprenorphine/naloxone. Finally, there should be coordination with hospital pharmacies to ensure that buprenorphine/naloxone is stocked in the ED.

Emergency physicians should be familiar with other forms of opioid agonist therapy, although initiation of treatment other than buprenorphine/naloxone should be limited to those with clinical expertise, or after consultation with an experienced provider.25 Methadone is recommended as second-line treatment of opioid use disorder, given that it is a full opioid agonist that can lead to respiratory depression.24 Methadone metabolism can be affected by many medications, including commonly prescribed antibiotics.24 Methadone also prolongs the QT-interval, increasing the risk of arrhythmias especially when combined with other QT-prolonging agents.24 Sustained-release oral morphine is third-line and prescribed to patients if buprenorphine/naloxone or methadone are not well-tolerated, or if the patient continues to lack clinical stability.24

Although generally not within their scope of practice, emergency providers should be aware of more intensive programs, such as injectable opioid agonist therapy (i.e. hydromorphone and diacetylmorphine), that are expanding as life-saving treatment for individuals with severe opioid use disorder who cannot stabilize on other opioid agonist therapy, and who are at high risk of imminent death due to illicit opioid overdose.24, 25

## **Provide overdose education and naloxone distribution and other harm reduction interventions**

1. *Overdose education and naloxone distribution should be offered early in the ED visit to all patients who are at risk of opioid overdose, and those who may witness an opioid overdose in the future, e.g. friends, partners, and family members of those who use opioids.*
2. *Sterile drug consumption supplies (e.g. needles, syringes, alcohol swabs, pipes, and smoking kits, and a safe disposal method for used supplies) should be provided to patients to reduce the harms and complications associated with substance use.*
3. *Patients at risk of overdose should be counselled on harm reduction practices and directed to local needle and syringe programs, overdose prevention sites, and/or supervised consumption sites.*

Harm reduction is an essential component of ED care for patients who use opioids. An ED visit represents a valuable opportunity to provide education and resources, and to reduce the harm associated with opioid use disorder. Specific harm reduction efforts vary across practice settings depending on locally available resources and equipment. However, every ED should make it a priority to build capacity and promote evidence-based harm reduction measures. ED providers should be knowledgeable of locally available harm reduction resources and connect patients to those resources when appropriate.

Every patient at risk of experiencing or witnessing an opioid overdose should be provided with a naloxone kit and education on its use early in their ED visit. This recommendation is supported by a large body of evidence demonstrating that overdose education and naloxone distribution (OEND) programs are cost-effective and reduce deaths from opioid overdose.33-35 In addition, the provision of naloxone kits and harm reduction education engages patients in discussions around harm reduction and substance use disorders, and may foster trusting therapeutic relationships with patients.

OEND in the ED should not be limited to patients presenting with opioid overdose, but also to those who use non-prescribed opioids, as well as those who are on regular doses of prescribed opioids. The 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care outline high risk groups that may benefit from OEND, which includes persons living with or in frequent contact with those who are deemed to benefit from OEND.36 OEND should occur early in a patient’s ED presentation, so as to capture those patients who leave the ED before their care is complete, or who are admitted to other hospital services.37, 38

Pre-assembled kits can be purchased from suppliers such as pharmacies, are provided free of charge by public health agencies in some Canadian jurisdictions or assembled on-site by ED staff.

In 2018, in a survey of Canadian ED physicians, 86% of respondents reported that they “would be willing to prescribe or distribute naloxone from the ED.” Perceived barriers included lack of allied health support for patient education (57%), lack of access to follow-up (44%), lack of knowledge surrounding evidence for THN (37%), and lack of training (31%).15

For OEND programs to be successful, EDs must provide support through regular education for physicians and allied health professionals on the evidence supporting OEND programs, the use of naloxone kits, and the local community programs that exist to support patients. This could be achieved through in-person training sessions, online modules, or required reading materials for ED staff. Physicians have also cited that “opinions of ED leaders would strongly influence a change in their clinical practice to incorporate opiate harm reduction interventions.39 Therefore a strong endorsement from hospital and ED leadership would propel successful implementation of ED OEND programs.

Patients who report substance use should be offered sterile supplies, which may include needles, syringes, alcohol swabs, pipes, and smoking kits, as well as a safe disposal method for used supplies. Provision of sterile supplies has been associated with reduced needle sharing among people who use drugs, in turn reducing the risk of transmission of blood-borne diseases and complications related to non-sterile drug consumption.40 Prior to ED discharge, patients should receive education on harm reduction strategies, such as using smaller test doses, not using alone, and carrying a naloxone kit at all times. Patients should also be provided information on how to access local services such as needle and syringe programs, overdose prevention sites, and supervised consumption sites. Given the limited time and resources in most EDs, strong working relationships with these community partners is necessary to provide patients with continuity and comprehensive care.

## **Reduce harm from opioids prescribed in the emergency department**

1. *Emergency departments should establish opioid prescribing policies that align local practices by providing guidance on screening, risk assessment, opioid selection, and judicious course duration to reduce risk of subsequent opioid use disorder.*
2. *Patients who are prescribed opioids from the emergency department should be counselled on the risks of adverse events, overdose and dependence, and provided instructions for safer storage and disposal.*

Opioid prescribing in the ED is sometimes necessary and appropriate for moderate to severe pain and must be done cautiously to mitigate harm. Beyond serious adverse events such as sedation, respiratory depression, and death, opioid prescribing in the ED has a significant influence on long-term risk for chronic opioid use across a patient’s lifespan.41 Notably, patients who receive even a short opioid prescription in the ED have a 5-13% risk for subsequently developing opioid use disorder.41 This risk exists for the pediatric patient as well, with current evidence suggesting links between lifetime therapeutic opioid use and opioid use disorder and/or opioid misuse later in life.42, 43

In the United States, ED opioid prescriptions contribute to approximately 10% of diverted prescriptions and 1.8% of prescription opioid-related deaths.44 On a population level, 71% of people who misuse opioids received opioids through the diversion of prescription opioids and 55% of people who use prescription opioids non-medically received them from a family member or friend.45 EDs should therefore have clear policies that promote responsible and evidence-based opioid prescribing.

The short- and long-term risk of opioids must be assessed prior to prescribing ordering opioids in the ED. For patients receiving chronic opioid therapy, it is imperative to determine if patients have a primary prescriber or opioid treatment agreement in place. These patients should be redirected back to their primary provider, whenever possible. Review of provincial prescription monitoring systems may demonstrate prescribing irregularities, including multiple opioid prescribers, multiple short prescriptions of various opioids, and frequent emergency department visits.37 Emergency providers should respond to these observations compassionately and non-punitively, with the goal to create therapeutic alliances with patients and build the trust required to initiate effective treatments for opioid use disorder.

A large U.S. based study found that approximately 10% of ED opioid prescriptions are not appropriate.44 This includes prescriptions for high daily doses, long-acting opioids for acute pain, and concurrent benzodiazepine prescribing.44 To minimize harms, prescribe non-opioids such as acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) as first line, then add in non-combination opioids as needed, ideally by a single route. Providing opioids by multiple routes is associated with accidental iatrogenic overdose.46 Emergency physicians should exercise knowledge of morphine equianalgesic dosing of opioids by their various routes so as to minimize the risk of respiratory depression.47

Patient factors, such as age or renal impairment, may influence a prescriber’s choice of opioid, formulation, route of administration, and dose. Some groups have advocated for prescribing of morphine rather than hydromorphone due to increased risk of potential harm with hydromorphone despite equianalgesic properties when compared to morphine.48 The increase in hydromorphone prescribing over the last two decades has been associated with a staggering increase in hydromorphone misuse, diversion and addiction.48 Hydromorphone also has a much higher street value as compared to morphine.48 Hydromorphone is more rapidly absorbed in the central nervous system leading to greater euphoric effects. There are also specific concerns regarding intravenous hydromorphone use for acute pain management due to its high potency, association with hypoxic events and tendency for physicians to overdose it as compared to morphine.46, 48 These effects are variable from patient to patient and any comorbidities present, e.g. renal impairment, obesity or sleep apnea.

Emergency physicians should limit the duration of opioid prescriptions for acute pain to short courses, e.g. three days. A recent Canadian study demonstrated that as much as 68% of the opioid prescribed from the ED go unused by patients.49 In addition, adult patients discharged from the ED with an acute pain condition consumed a median of fewer than 10 tablets of morphine 5 mg (or equivalent).49 For acutely painful conditions, 95% of adult patients were adequately managed on a total of fifteen 5 mg tablets of morphine for the first three days post ED-discharge. 49

In addition to limiting the amount of opioids prescribed, providers should consider including a daily (with witnessed ingestion) or weekly dispensing direction on prescriptions to reduce the risk of diversion or misuse. Close follow-up should be arranged, and patients should be counselled to store opioids safely away from children and dispose of unused opioids appropriately by returning them to a pharmacy.

## **Improve transition of care and social stabilization**

1. *Emergency departments should develop local referral pathways to community-based providers for patients with identified opioid use disorders.*
2. *Providers should identify patients with social factors that may inhibit engagement in treatment (e.g. unstable housing, disrupted home environments, lack of medication coverage, lack of identification/health care coverage), and initiate referrals to local supports.*
3. *Missed scheduled doses of opioid agonist therapy (e.g. methadone, buprenorphine/naloxone) should be provided in the emergency department to patients on stable treatment, after confirming the time of last dosing with the patient’s community pharmacy. If patients have missed doses prior to the day of the emergency department visit, consider contacting their primary provider to discuss dose replacement as per provincial guidelines.*
4. *Emergency departments should ensure that treatment is provided in a patient-centred and compassionate manner that is free from judgment, bias, and discrimination.*

While opioid use disorder treatment and other health supports can be initiated in the ED, patients will need urgent referral to community-based health care providers for ongoing management. This model of care is similar to the management of other chronic diseases seen in the ED where the ED physician provides urgent assessment and treatment initiation, and then transfers ongoing management to primary or specialist care in the community.

Emergency providers should be aware of referral pathways for patients with opioid use disorders for ongoing management in their local community. Ideally, if buprenorphrine/naloxone in initiated in the ED, follow-up should be available within 24-48 hours so that dose titration can occur quickly. A coordinated departmental process for referral including a standard referral form may be most efficient and effective. A discharge checklist, particularly if medications are being prescribed from the ED, should also be considered. Concurrent medical and mental health disorders are common among people with substance use disorders;50 ED care and referral pathways should account for these diverse and complex needs.

Rapid access addiction medicine (RAAM) clinics are low-barrier, walk-in clinics where patients can present for help with substance use related concerns. These are becoming increasingly prevalent in Canada and are an immediate point of access for older youth and adult patients discharged from the ED.13, 51, 52 Many are located in or near hospitals to facilitate easy access. Early evidence suggests that this model of care may reduce future ED visits.13, 52

Virtual opioid dependency programs use telemedicine to cover geographically dispersed areas and improve access to specialist treatment particularly in rural areas. Telemedicine programs in Ontario have been shown to have similar treatment retention rates to in-person programs for the management of opioid use disorder.53 Virtual opioid use dependence programs also exist in Alberta and provide support to rural ED providers who initiate patients on treatment.54

Patients in the ED may miss their scheduled dose of OAT. For patients on a stable dose (with no missed doses) who will miss their regular dose while undergoing treatment or investigations in the ED, efforts should be made to provide this dose while the patient is in the ED. This will prevent them from going into withdrawal and potentially leaving before they receive care. The last dose received in the community should be confirmed with the patient’s pharmacy prior to administering a dose in the ED.

For patients with missed OAT doses prior to their ED visit, confirmation of last dose and discussion with their regular provider is suggested, , particularly for patients on methadone and slow release oral morphine. Patients who miss two or more doses of OAT may require reduction of their dose due to loss of tolerance.24 Dose adjustments should be made in accordance to provincial OAT guidelines. If a replacement dose is provided in the ED, the patient’s pharmacy must be informed to avoid double dosing once the patient leaves the ED.

All EDs should deliver patient and family-centred care in a compassionate manner that is free from judgment, bias, and discrimination. Patients with opioid use disorder often face compound marginalizations related to unstable housing, disrupted home environments, poverty, lack of photo identification, social isolation, unstable health care coverage, and mental health comorbidities. These complex issues necessitate an interdisciplinary approach, including social work, case management, peer workers, and a variety of community agencies. Peers and family members may be involved, if deemed appropriate. Under some circumstances, it may be appropriate or necessary to consider involuntary admission as permitted and required under provincial mental health legislation.55 A coordinated strategy involving these agencies and professionals should be available and initiated from the ED, whenever possible.

When evidence-based health care services for people with opioid use disorders are not readily available, emergency physicians have a critical advocacy role to play at the hospital, health region, and provincial level. This may involve documenting the need for addiction medicine assessment,52 practicing part time addiction medicine themselves, advocating to close gaps in care, and/or attending public forums in support of supervised consumption services and other essential programs. Emergency providers are on the front lines of the opioid crisis and have a credible and powerful voice in both health care, community, and political settings.

**NEXT STEPS**

Substance use disorder education has been lacking across the spectrum of medical training.56 This lack of education and training has been identified as a major barrier to providing appropriate care for patients with substance use disorders, and must be addressed in order to build capacity across EDs in the country.15, 39 There is evidence to suggest that physicians who have undergone training are more likely to provide treatment for opioid use disorder, such as buprenorphine/naloxone.57

The College of Family Physicians of Canada certifies family physicians who have added competence in Addiction Medicine.58 The Royal College of Physicians and Surgeons has also established an Area of Focused Competency in Addiction Medicine.59 Within the Royal College’s new competency-based residency curriculum, Canadian emergency medicine residents will need to develop proficiencies in addiction medicine, including those related to encounters with individuals with opioid use disorder.38 CAEP will support educational initiatives and curriculum for areas of competency related to opioid use disorder for emergency physicians, and act as a platform for exchange of knowledge and best practices across the country.

Finally, further attention should be directed towards the challenges in assessing and monitoring the impact of the opioid crisis on EDs across the country. Inadequate ED data collection on opioid-related visits remains a significant barrier to public health planning. In 2018, Ontario, Alberta, and the Yukon were the only jurisdictions in which all EDs submitted sufficient data to the National Ambulatory Care Reporting System (NACRS) for analysis.6 As such, the most recent Canadian Institute for Health Information (CIHI) report on opioid-related harms only provided analyses on ED data and trends in ED visits in these jurisdictions.6 EDs across the country are encouraged to collaborate with public health organizations on data collection and surveillance, and improve monitoring of trends in ED visits due to opioids across the lifespan at the provincial and national levels.

**CONCLUSIONS**

Emergency physicians are on the front lines of the opioid crisis and must act to address Canada’s largest public health emergency to date. The recommendations outlined in this position statement are important steps to ensure that people of all ages with opioid use disorders are provided equitable, compassionate, and evidence-based care in the ED setting. These recommendations can be implemented across urban and rural practice environments nationwide and should be adapted to meet patient needs and availability of resources locally.

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